Prophylactic BSO Option for High-Risk Women

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FROM OBSTETRICS & GYNECOLOGY

Women at high risk of ovarian cancer based on family history and *BRCA1* or *BRCA2* mutation should undergo risk-reducing prophylactic bilateral salpingo-oophorectomy once childbearing is complete, according to guidelines released by the Society of Gynecologic Oncologists.

"For women at average risk of ovarian cancer who are undergoing a hysterectomy for benign conditions, the decision should be individualized after appropriate informed consent, including a careful analysis of personal risk factors, concomitant disease, presence of gynecologic disease (endometriosis, chronic pain, infection), and age," wrote members of the SGO's clinical practice committee. Some evidence suggests that bilateral salpingo-oophorectomy (BSO) has a negative impact on health when performed prior to menopause – including increased risk of cardiovascular disease, lung cancer, and possibly neurologic conditions.

Dr. Ritu Salani agreed with the recommendations, saying that the high risk for ovarian cancer in these women outweighs any potential benefits from retaining the ovaries. Dr. Salani is assistant professor of ob.gyn. at the Arthur G. James Cancer Hospital and the Richard J. Solove Research Institute in Columbus, Ohio.

The SGO also pointed out that there are insufficient data to provide sound counseling on the long-term health impact of BSO for postmenopausal women.

"This should be an individualized decision, and patients [in this age group] should be aware of pros and cons for each until we have better data," Dr. Salani said in an interview. "Typical practice is to ad-

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vocate BSO for this patient population."

"This paper offers some insight with regard to counseling discussion recommendations, and emphasizes the need for additional research concerning BSO's long-term impact on a woman's health, especially as it relates to cardiovascular and neurologic diseases," lead author Dr. Jonathan S. Berek said in a press release. Dr. Berek is the chair of obstetrics and gynecology at Stanford (Calif.) University.

In the guidelines – released in the September issue of the journal Obstetrics & Gynecology (2010;116:733-43) – the authors also highlighted the lack of an effective screening tool for ovarian cancer: "There is no proven method of screening for ovarian cancer that effectively reduces mortality. CA 125 monitoring and transvaginal ultrasonography have high false-positive rates, especially in premenopausal women."

Women who are carriers of a germline mutation in *BRCA1* or *BRCA2* have the greatest risk of ovarian cancer – an estimated 15%-60% risk over a lifetime. For these women, the value of prophylactic salpingo-oophorectomy has been well documented, the committee noted.

Women with a strong family history of either ovarian or breast cancer may carry a deleterious mutation and should be presumed to have higher-than-average risk. This is especially true if there are a number of family members who developed these cancers when they were premenopausal. "These women are potentially at high risk even if they have not been tested because there could be other mutations that are either untested or yet undiscovered that confirm higher-than-average risk of these diseases," the committee members wrote.

The decision to perform a hysterectomy in conjunction with BSO in the high-risk group should be individualized. The committee members offered several examples. For women receiving tamoxifen, which is associated with an increased risk of polyps and endometrial cancer, hysterectomy may be appropriate. Women who carry mutations in *BRCA1* or *BRCA2* do not appear to have an increased risk of uterine or cervical cancer, so "routine performance of a prophylactic hysterectomy is discretionary," according to the guidelines.

Women who do not have a strong family history suggesting the possibility that they carry a germline mutation or who do not have a documented germline mutation were considered by the committee to be at average risk of ovarian and breast cancer. To assess the benefits and risks of BSO, the committee reviewed 11 studies of oophorectomy performed in women who were presumed to be at average risk of ovarian cancer.

It is important that women at average risk of ovarian cancer and their gynecologists consider carefully the indications for hysterectomy and whether BSO also should be performed, despite the potential negative long-term effects, according to the guidelines.

A number of studies have suggested a cardioprotective effect for estrogen because the reduction of endogenous estrogen (as with BSO) correlates with an increase in lipids, a reduction in carotid artery blood flow, and an increase in subclinical atherosclerosis, the authors noted.

In addition to adverse effects on cardiac and bone health, increased risks of Parkinson's disease and cognitive impairment or dementia have recently been reported among women who underwent bilateral oophorectomy. Importantly, the increased risk of cognitive impairment and Parkinson's disease did not appear to be altered by estrogen. However, these increased risks appear to be dependent on the age at oophorectomy and the use of estrogen replacement.

"There are clinical situations in which patients should be counseled strongly to undergo elective BSO. As pointed out, patients found to have severe endometriosis, pelvic infection, benign ovarian neoplasms, and chronic pelvic pain have a higher probability of undergoing BSO. This seems warranted given that women with these conditions have a significantly higher risk of repeat surgery," the committee members wrote.

The authors did not report any potential conflicts of interest. ■